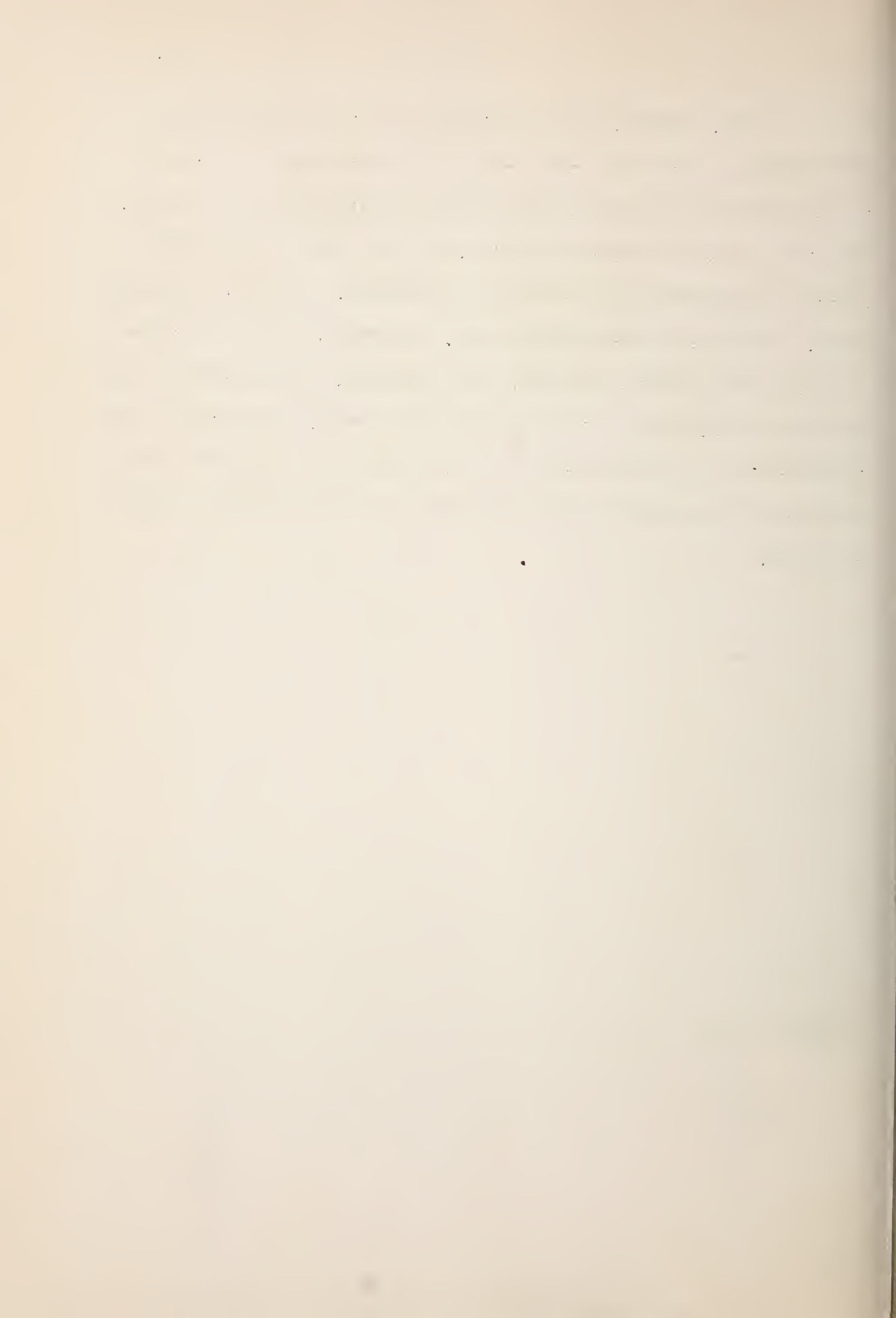
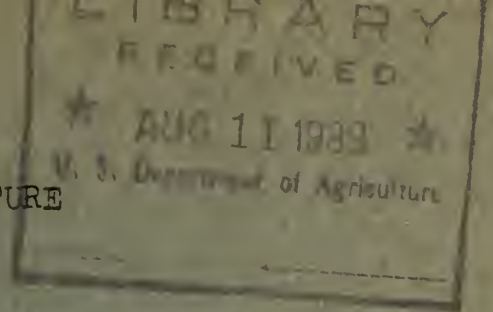


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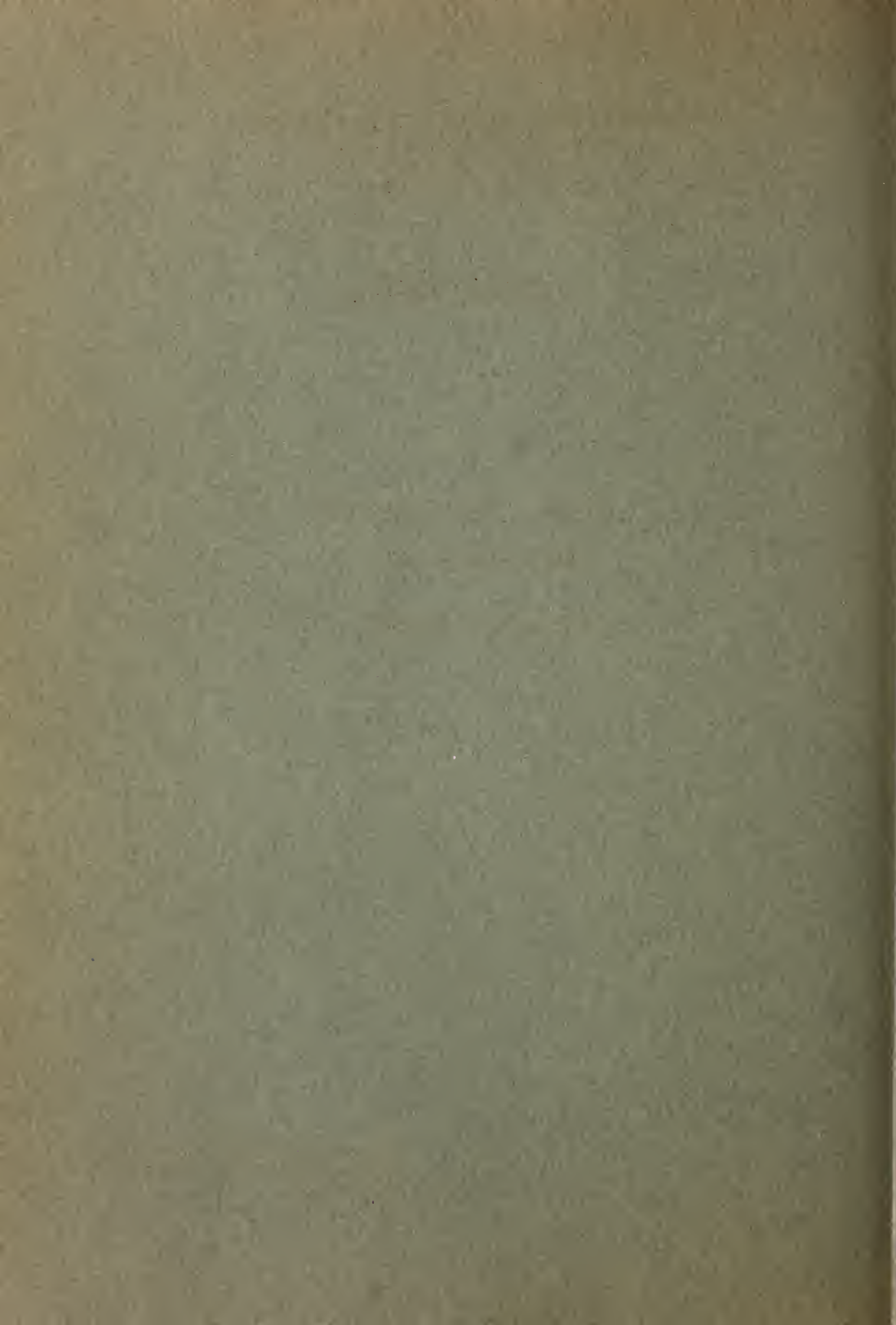


Hugh G. Calkins
Regional Conservator

SOCIOLOGICAL SURVEY OF THE
NAVAJO RESERVATION

Statement of Procedure

Regional Bulletin No. 32
Conservation Economics Series No. 5
May, 1936



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Studies of the human population on the Navajo Reservation, which have been in progress in connection with land management surveys, have been reorganized and henceforward will be conducted under the designation of the Sociological Survey of the Navajo Reservation. This is conceived to be a continuous series of studies dynamically related to the work of planning. In the initial stages it will be essentially a survey of human dependency on resources. The following pages contain a statement of procedure to be followed in this survey. The methodological principles on the basis of which this procedure has been developed have been stated elsewhere.¹

See "A Note on Method" in Introduction, The Tewa Basin Study, 1935.
Regional Memorandum No. 3, Southwest Region, November, 1935.
Report of the Committee on Regional Policy, Southwest Region, February, 1936.

ORGANIZATION OF LAND MANAGEMENT SURVEYS

In the course of attempting to define the part that sociological investigations should play in the development of a technique of land management, it became necessary to place the sociological surveys in the larger context of land management studies, and to subject the sociological surveys to careful scrutiny so that the concepts involved and the procedures employed might be rigorous and scientific. It is assumed that insofar as the method of land management approaches a method of science this organization must be attained and maintained throughout the range of land management studies.

As in all organized investigation, search for factual data is basic to land management studies. As in all such investigations, furthermore, this basic material is at first largely undifferentiated. Facts enter into the structure of meaningful and usable forms of knowledge only as they become organized. The organization of factual material into usable forms of knowledge is achieved through the discovery of significant relationships existing among them.

The technical services engaged in the basic land management studies happen to be organized as specialized branches, each dealing with an aspect of the environment or embodying a technique of dealing with it. In searching for the key to the

method of integration in land management studies, it is to be noted that integration is to be achieved not as between the various disciplines involved in these studies, but through the organization of factual material common to all these disciplines. Furthermore, this integration is to be achieved not in one pooling together of all the facts, but through a process involving construction at various levels of organization and significance.

It is possible to distinguish in these studies at least four stages of development:

Initial description of the area.

Description of the present use of resources.

Description of the present distribution of resources.

Variability of major elements.

In going over these four stages of integration in land management studies, it may be pointed out that the first stage may be conceived of as the stage of the development of a hypothesis. In the analysis of a system of complicated relationships, it is necessary to project such a conceptual scheme. A Hypothesis is essentially a provisional statement of relationships

1. Initial Description of the Area:

Physiography. Soils. Vegetation. Animal Life.
Distribution of human population. Techniques
of the use of resources. Trade. Relations with
other areas.

It is proposed in the survey of land management that the hypothesis be formulated in advance of any surveys and that

it contain a preliminary description of the area under consideration. This should be in terms of the selection of significant categories of Navajo dependency on available resources. It is suggested that this preliminary description be the first step from a purely qualitative description of the environment towards a description containing quantitative elements. Such a description should define in general terms the area of consideration and determine in rough terms the relationship between this land management area and other land management areas.

This description will serve the following purposes:

a) It will represent the first statement of a hypothesis of the relationship of various resources to Navajo livelihood; b) It will mark out in gross terms the specific nature of the area as distinguished from other areas, in terms of the measurement of resources and human dependency on these resources; c) It will serve as a means of establishing the priority for study of certain land management units.

2. Description of the Present Use of Resources:

Concentration of human population. Animal population.
Degree of overstocking. Condition of the range.
Fuel supply. Watersupply: precipitation; run off.
Agricultural lands. Crops: kind, techniques of
cultivation, yield.

The second level of organization involves a complete appraisal of all resources dealt with in the preliminary description. This should contain an inventory of the present and potential resources in the area. The sociological survey will

be charged with a quantitative description of the human use of these resources by consumption groups.

3. Description of the Present Variability of Dependency on Resources:

Characteristics of consumption groups. Importance of various sources of income: wages, livestock, wool, rugs, agriculture.

The third level of organization is an attempt to place the foregoing material significantly within the human context through an analysis of the characteristics of various income groups. An attempt will be made to study all resources as they operate in securing livelihood for consumption groups having access to greater and lesser resources. All consumption groups will be ranked from lowest to highest. On the basis of the total range of the array, income groups will be marked out and within these income groups samples will be selected. On the basis of these samples, an intensive study of consumption will be made. This study will attempt to determine the exact expenditures of Navajo groups chosen as the sample groups and will attempt to determine the quantitative and qualitative effects of lesser or greater income on consumption. Within these sample groups, the importance of various types of income will be determined with a view to describing the characteristic variations in type and amount of income within the range of the total groups.

4. Variability of Major Elements:

Wages. Composition of the livestock population.
Quality of the herd. Handling of livestock.
Agricultural land. Agricultural practices.
Craft.

The foregoing characterizes the survey levels of land management studies. Beyond this, the task of planning involves the discovery of the variability of all associations of variable factors. Variability may be defined as the capacity of any element to be changed both as to its nature and its quantitative significance. This level is one primarily of analysis and organization, and may involve the collection of no new materials. It may be defined as a description of the potential variability of associations of factors involved, in the light of the objectives of land restoration and enlarged human livelihood.

The final stage of planning involves the proper combination of all of these variables designed to achieve these objectives.

SOCIOLOGICAL SURVEY

*

Studies Involving Measurement

SOCIOLOGICAL SURVEY

It will be desirable to distinguish three types of inquiry that will be undertaken by the Sociological Survey. The first type will concern itself with measurement - the quantitative description of human dependency upon resources.

Within any sociological situation certain elements of dependency will be relatively constant and others will vary. In the pueblos of northern New Mexico, for example, satisfactory housing is relatively constant; in New York City adequate housing is extremely variable. The existence of relatively constant and relatively variable elements necessitates the employment of separate procedures of measurement. Those factors in Navajo economy, which are significant and variable, will be examined through the use of a schedule. The schedule is designed to provide limited but basic information for each consumption group within the area.

In the case of those elements that are relatively constant in human dependency complete coverage is not needed. Sample measurements will be applicable throughout the field of consideration. Two such studies on the Navajo Reservation will be a measurement of the yield of agricultural crops and an estimate of the nature and extent of wood use.

Studies involving complete coverage and sample studies will provide a measurement of the goods and services produced,



used, and exchanged. This will serve to determine the extent of the problem without determining its specific content. It is with the specific content of the problem that planning must ultimately be concerned. Insofar as the sociological survey is successful in preparing the materials for planning, it must provide the basis for sociological prediction. This basis will only be at hand as the result of interpretative studies which will illuminate the relationships between various elements in the economy of the Navajo people.

Two such studies are projected. The first of these is a study of the external aspects of Navajo economy and here the appropriate unit of consideration will be the institutionalized commercial function as embodied in the trader. The second study proposed is a study of the self-contained, internal aspects of Navajo economy, and the unit of consideration will be the economic activities of the consumption group.

The Sociological Survey as proposed is predicated upon the assumption of levels of inquiry. It recognizes that within this study there will be a consistent progression from relatively unrelated, extensive information to organized, intensive information and from measurement to interpretation.

The Navajo Reservation numbers a large preliterate population within its boundaries. This is sometimes considered to introduce a special complication. It is felt that studies designed to achieve an understanding of the behavior of this

population must be organized in terms of ethnology. Ethnology is popularly supposed to have developed the technique of study which is specific and prerequisite to the understanding of pre-literate peoples. The Science of Ethnology has grown up around this conviction. But this is by no means a proven case.

The Sociological Survey of the Navajo Reservation is predicated on the assumption that the behavior of mankind is susceptible of analysis by a single methodology. This methodology will take social behavior as its starting point and introduce the specifically ethnological concepts such as kinship, the origin myth, and ceremonial activity only when they are necessary and relevant to the understanding of significant contemporary activity. It is believed that this approach will be more likely to produce the information that is required rather than the cataloging of customs, beliefs, observances, taboos and kinship structure with the hope of finding a contemporary application which is the current practice of South-western ethnology. Inasmuch as it is believed that purely morphological descriptions of Navajo society will not add to the fundamental understanding of Navajo behavior, no traditional ethnological studies are contemplated.

A certain amount of information usually considered ethnological will probably be collected by the Sociological survey. Similarly the bulk of the subject matter of the survey will under the current system of nomenclature be considered



economic subject matter. However, there is a persevering misconception which is introduced and sustained by essentially unrealistic divisions such as these. Stated simply, if the social sciences aim at a description and causative analysis of human behavior in society, then the subject matter of the social sciences is basically just as unified and organic as the human behavior which it is proposed to define. For this reason, the term "sociological survey" is adopted with the understanding that the term "sociological" should not be taken to refer to the formal subject matter of the formal discipline known as "sociology", but rather as referring to a single science of society which will endeavor to use the concepts and techniques of the separate disciplines as they apply to the single problem of social behavior.

The first part of the book is devoted to a general
introduction of the subject. The author then
presents a detailed account of the history of the
subject, from its origin to the present time.
The second part of the book is devoted to a
detailed account of the theory of the subject.
The author then presents a detailed account of the
history of the subject, from its origin to the
present time. The third part of the book is
devoted to a detailed account of the practice of
the subject. The author then presents a detailed
account of the history of the subject, from its
origin to the present time. The fourth part of
the book is devoted to a detailed account of the
theory of the subject. The author then presents
a detailed account of the history of the subject,
from its origin to the present time. The fifth
part of the book is devoted to a detailed account
of the practice of the subject. The author then
presents a detailed account of the history of the
subject, from its origin to the present time.

THE PLACE AND USE OF THE SCHEDULE
IN
THE SOCIOLOGICAL SURVEY

The schedule is merely one among the several instruments of investigation which together constitute the techniques and procedures of the sociological survey. Within the area of study various types and levels of information exist, and must be obtained in usable, organized form if our subject matter, Navajo Livelihood, is to be understood. To each of these phases of our problem another technique of attack must be brought. Certain tools of investigation are best adapted to securing certain types of information. Relatively static and extensive information may best be obtained by the use of a uniform schedule, which attempts to secure information within certain relatively few categories. The meaning of these categories is definitely known and rigidly defined. The schedule is not designed to secure a picture of all of Navajo livelihood - or of even many of its aspects. It attempts only to secure information on the distribution of ownership and use of certain resources, and to measure the amount of goods and services derived from these resources in terms of the consumption unit dependent upon them.

It can be seen, then, that the schedule pretends no inquiries into the dynamic aspects of Navajo life. For example although information on the clan is to be obtained in the

THE HISTORY OF THE

REIGN OF

CHARLES THE FIRST

BY

JOHN BURNET

OF THE UNIVERSITY OF OXFORD

IN TWO VOLUMES

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schedule, it is only to provide an aid to the identification of individuals or groups; it is not to elucidate the function of the clan in Navajo life. No conclusions will be drawn upon the basis of an assumption as to its function.

INSTRUCTIONS TO ACCOMPANY
THE NAVAJO SCHEDULE

COMMENTS ON INTERVIEW PROCEDURE:

Members of the staff with field experience are probably aware of the many possible variations in the technique of interviewing with a schedule. One of the techniques frequently used, particularly under pressure of time, is to fire direct and specific questions, note the answers, and depart. This technique, besides being undesirable from the point of view of the schedule-taker as an individual, is not productive of the best results. A cursory glance at the schedule will indicate that many of the specific items of information desired in various categories can be obtained not as answers to single questions but only as end-products of a series of questions and answers. This specific end-information will appear, then, in the context of a somewhat leisurely, conversational interview in which the schedule will be used to indicate not the specific questions to be asked, but the specific information desired. There are several advantages in this technique. First, the person being interviewed, with more time and less pressure upon him, is more likely to grasp the nature of the information desired and will therefore be in a better position to supply the information. Second, it seems likely that under such conditions the person being interviewed will also be more willing to furnish such information. Third, the interviewer, by getting a

more complete picture of the entire situation, will be better able to determine accurately and reliably the information to be noted on the schedule. The schedule, in short, is to be regarded as a tool in the technique of investigation. From this point of view, it is suggested that the interviewers regard as their objective the securing of accurate, reliable, and understandable data rather than the filling in of the blank spaces on the schedule; and that they take as much time as necessary to obtain this objective.

It is suggested also that the interviewers do not press for information. The Navajos in many cases may not be able to give accurate information in reply to some of the questions. In reply to question #13 for example they may say "I don't know - some sheep every week." If pressed they may finally give some specific number, but the likelihood is that they actually do not know and the number is inaccurate. It is better in such cases to have no reply than an inaccurate one.

INSTRUCTIONS:

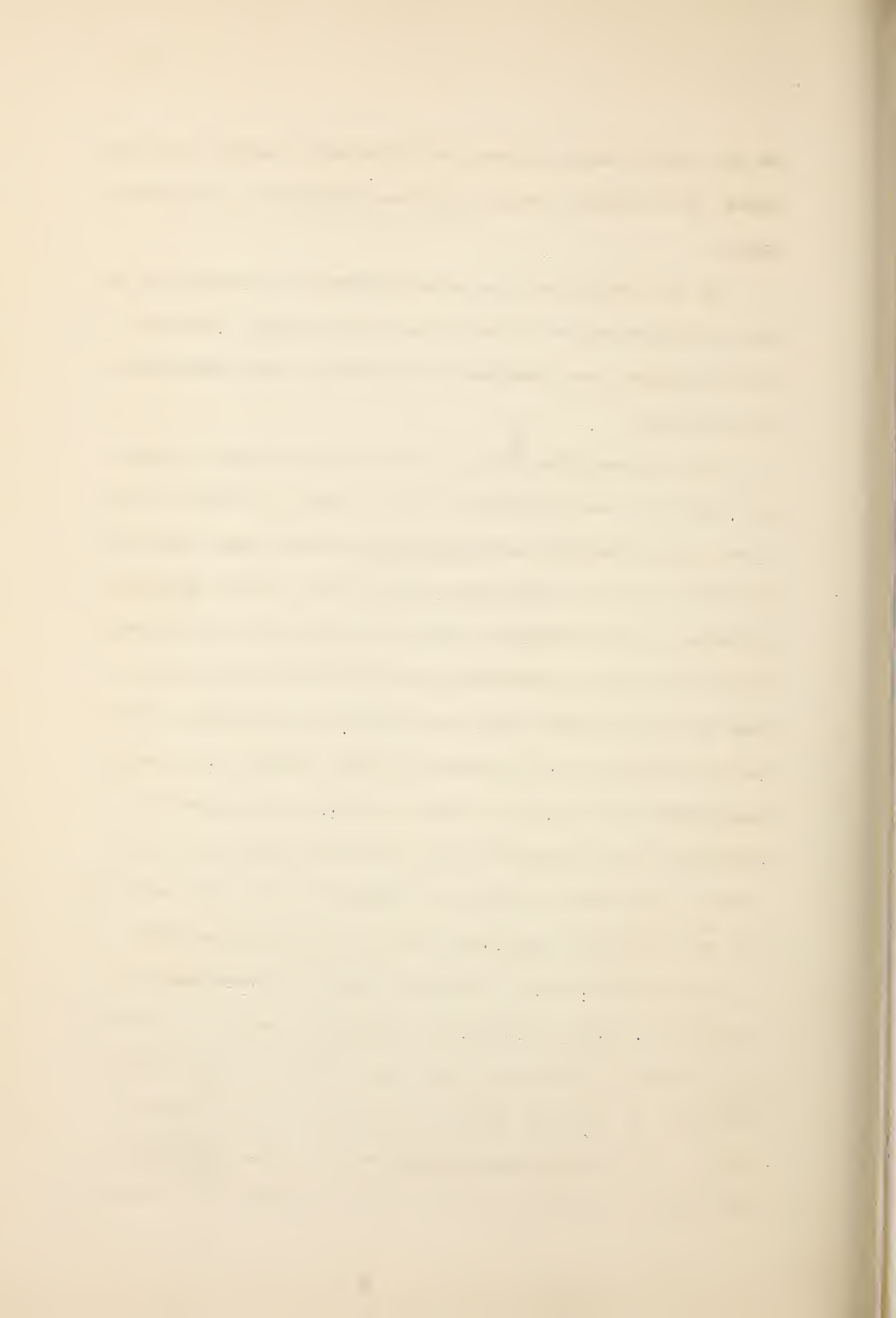
1. The enumerator should assign a number to each individual appearing on a schedule. The number to be assigned to the person appearing on the first schedule should be No. 1. Thereafter, individuals will be numbered consecutively. Within each new area these individual numbers will begin at No. 1.

Each schedule, in addition, should be numbered, beginning

at No. 1 and running consecutively thereafter within the given area. Each schedule number will then represent a consumption group.

2. The Indian Service number refers to the number on the identification tag which was given to the Navajo. Wherever these tags have been retained by the Navajo, the numbers are to be listed.

3. A consumption group is defined as a group of people who constantly and habitually fund and share all forms of income. Individuals who are temporarily working away from home, but who continue to fund some part of their income, are to be included in the consumption group with appropriate description. Individuals who are permanently away from home, even though they may occasionally make contributions to the group, are not to be included in the consumption group. Within the consumption group the individuals should be listed from oldest to youngest. It is recognized that the delimitation of the consumption group will be the most difficult, and at the same time, the most crucially important, part of the schedule-taking. It is suggested that three criteria be used in determining the consumption group: 1) Regular funding and sharing of products of livestock; 2) Regular funding and sharing of agricultural products; 3) Regular sharing of products secured from the trader. Unless all three criteria are met, the individual or individuals in question are not to be included in the consumption



group. In any case, where the enumerator is in doubt, this should be carefully noted and discussed at the earliest opportunity.

Wherever individuals have accounts with a trader, the name there used should be used on the schedule.

4. Clan. Clan information is to be secured as an aid to the identification of persons or groups. It will not be used as an assumption upon which to base conclusions about the organization of the social life of the Navajo.

5. Relationship will be understood to include relationships both of blood and marriage. These relationships should be reckoned from the oldest male, in direct line, in the group. Thus in a group containing an older married couple, a younger married couple and their children, relationships will be reckoned from the male in the older married couple. Abbreviations should be used to represent relationships. A partial list of abbreviations follows:

o - oldest man	d - daughter
w - wife	gs - grandson
m - mother	gd - grand-daughter
b - brother	sl - son-in-law
si - sister	dl - daughter-in-law
s - son	

Other abbreviations should be adopted to represent relationships for which abbreviations do not appear above. Care should be exercised that the abbreviations will be mutually exclusive. Where unrelated individuals are members of the

consumption group this should be recorded.

6. It will not be possible to record exact ages and no effort should be made to do so. An error of several years in an individual's age will not be significant. Absolute age is of no significance for the purposes of this schedule. Relative age is the important consideration.

7. Sex is to be indicated as either m or f.

8. All trading posts at which the consumption groups have run an account in the past year should be recorded. The name of the individual who has the account should be indicated in the "Name" column; and the name of the trader in the "Trader" column. If possible the name used for the individual should be that used by the trader in his account.

9. The question where and how long ranged should be understood as a measurement of the number of livestock which range outside the land management area in which the schedule is being taken, the name of this other land management area, and the period of time this stock ranges there.

In cases where the consumption group owns more than 50 cattle or 200 sheep, the sub-areas both within and without the land management area under consideration, in which the livestock is ranged, should be noted by name. The period of time the livestock ranges in each of these sub-areas should also be noted. This should be done specifically and separately for cattle and sheep.

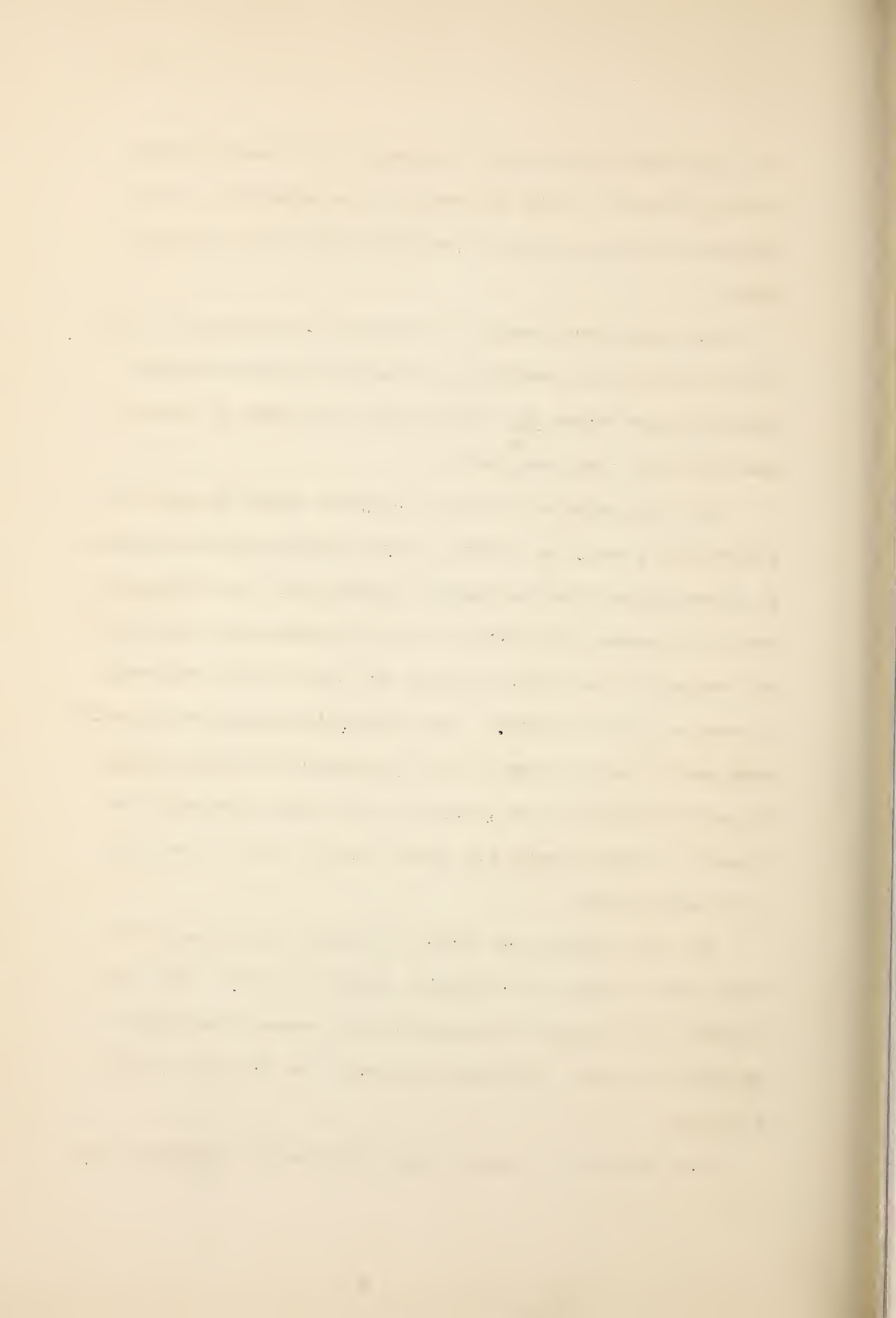
10. Column 11 asks for the names of all people outside of the consumption group who assist in the operation of the livestock belonging to the consumption group under consideration.

11. Any direct sharing of livestock, or products of livestock, with persons outside the consumption group should be recorded under Column 12, together with the names of the persons with whom they are shared.

12. The number of livestock consumed should be asked for a period of a week, or a month, or the longest possible period. It is recognized that the number consumed will vary seasonally, but it is assumed that during the 8 or 9 months when crops are not coming in, the number consumed will vary little from week to week or month to month. (Any information secured which would cast doubt upon the truth of this assumption is worth noting). If any information can be secured on the number per month ordinarily consumed during the summer season, this is obviously worth noting also.

13. The exchange or barter of either corn or sheep for other products with other Navajos should be noted. (Not with trader). If possible the amounts of the products exchanged should be secured. If there is no exchange, this too should be noted.

14. Through the use of a map, which will be provided, upon



which individual fields will be indicated and numbered, the particular field or fields owned by the consumption group will be noted on the schedule by field number. (In cases where the same fields are owned by two consumption groups, the same field number will eventually appear on the two schedules).

15. Similarly all the fields worked on by this consumption group, whether owned or not, will be noted on the schedule by field number. (This is intended to include all fields upon which members of this consumption group regularly work; not merely those fields exclusively operated by this group).

16. The kind and amount of crops raised on those fields which are both owned and worked by this consumption group should be noted. (This does not include fields worked but owned by others). It is recognized that it will not always be possible to secure information on amount. It may be possible, however, to secure information in terms of proportion of the total crop, (for example, 1/2 crop) or sacks or pounds, etc.

17. Similarly kind and amount of goods received from fields not owned but worked on by members of this consumption group should be noted.

18. The kind and amount of goods received from fields owned by this consumption group, but not worked by this group, (that is - used by other groups) should be noted here. If no compensation is received for use of fields by others, this should be noted.

SCHEDULE NO _____

ENUMERATOR _____

AREA _____

DATE _____

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
S C.S.	I.S.	Consumption Group	Clan	Relationship	Age	Sex	Remarks
No.	No.	Name					

(9)

WHO HAVE TRADERS ACCOUNTS

Name	Name of Trader	Location of Trader
------	----------------	--------------------

SCHEDULE NO. _____

ENUMERATOR _____

AREA _____

DATE _____

LIVESTOCK

(10) Where Ranged and How Long	(11) Operated With	(12) Shared With	(13) <u>Consumption</u> Kind No.	(14) Exchange in Sheep and Corn
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19. While the figure obtained here may in many cases have little significance, there will probably be a certain number of cases in which we will have a fair idea of the amount of the crop in question and the extent of exchange. In such cases it will be useful. The period of time each crop lasted should therefore be obtained in every case and recorded in months or weeks.

INSTRUCTIONS
FOR THE COMPILATION OF CASH INCOME DATA
THROUGH TRADERS' ACCOUNTS

In the analysis of traders' accounts, two types of information are desired. The first of these is a rough measurement of the type of goods bought by the Navajos; the second is a measurement of those productive activities of the Navajo which have made these purchases possible.

A rough measurement of the type of goods purchased will amount to a broad analysis of consumption. It is believed that the best available measure of this will be provided by a gross measurement of the amounts of all products purchased by the trader for sale to the Indians. Those goods consumed by the trader and his family and those purchased by non-Indians should not be included. (For example, regular purchases by white employees of agency seats and schools). It will be necessary to make these deductions by estimate with the assistance of the trader. It may be possible to estimate the amount of casual purchases by people not living in the area. If this can be done, these purchases should also be deducted.

Any purchases made by the trader from the Indians, which are not resold to the Indians in this area, should be excluded. No attempt should be made to classify these products. All products listed on traders' bills and invoices

should be recorded in the terms in which they are listed.

A measurement of the productive activities of the Navajo through the traders' accounts will involve the examination of each account which is run at the traders. From these accounts, every credit which has been given a Navajo should be recorded, both as to the kind, amount, date of these credits and the person in whose name the account runs. It may be anticipated that credits for rugs or pelts may sometimes be listed as cash credits. Care should be exercised so that all credits which appear as cash credits will be specified as to kind. The following kinds of credits may be predicted: government checks, sheep, wool, rugs, cattle, goats, goat pelts, sheep pelts, hides, cash, and agricultural produce. This is not intended to be exhaustive. Any other credits not anticipated here should be detailed in the same way.

Inasmuch as some traders located near the edge of any given land management area may be trading partly inside the area and partly outside the area, it will be necessary to correct any figures as to the trader's purchases for sale to Indians by an estimate of the amount sold inside and the amount sold outside the area.

A MEASUREMENT OF YIELD
FOR
VARIOUS CROPS

Navajo agriculture has often been characterized as "primitive". From the term "primitive" certain value judgments are drawn. If, by inspection, the technique of cultivation is discovered to be different, it is forthwith assumed that the yield must be poor. This inference has apparently been so persuasive that little information exists on yields of Navajo crops under Navajo techniques of cultivation.

Therefore, a study to determine the yield of crops under varying conditions of Navajo cultivation will be undertaken for the reservation as a whole. From the results of this study, it will be possible to make a reliable estimate of the amount of agricultural produce raised in any given area by applying corrected estimates to the crop map obtained in conjunction with the schedule.

It is proposed to single out those factors in Navajo agriculture other than techniques of cultivation which cause a significant variation in yield for any given crop. This will be done with the assistance of the agronomy division. Tentatively the following factors are suggested:

1. Precipitation
2. Soils
3. Availability of water
4. Elevation

A measurement of the following crops which are taken to be widely grown on the Navajo Reservation under the widest possible conditions of variation in yield will be made:

1. Corn
2. Alfalfa
3. Melons
4. Wheat
5. Beans

As a result of these measurements, an average estimate of yield of various important crops can be shown under the variety of conditions obtaining on the reservation. As a result of knowledge as to climate, soils, elevation, and availability of water supply in any land management area, an estimate of yield for various crops can be obtained that will be satisfactory within the limits of the need for planning. Ignoring the variation in yield caused by difference in technical proficiency will not be a significant hindrance to the understanding of Navajo agriculture.

ESTIMATE OF WOOD USE

It is anticipated that there will be a marked variation in wood use from one part of the reservation to another in direct proportion to proximity to an available supply. However, it is not anticipated that variation within a land management area will be so marked as to require complete coverage. Therefore, a measurement of wood use will be undertaken on the basis of a sample. The unit of consideration will be the consumption group. A significant percentage of all consumption groups living in the area will be selected in a manner to insure equal geographic distribution. The following information will be obtained for each consumption group:

- 1) The kind and amount of wood or brush used for fuel. The amount may be estimated by wagonloads of such a conveyance as is used for collecting. If brush or wood is gathered by hand and no reliable estimate can be made by the Navajo himself, a record of loads may be kept over a period of a month or two.

- 2) The kind and amount of wood and brush used for purposes other than fuel.

- 3) The sources of various types of wood and brush used.

Institutional Studies



EXTERNAL ASPECTS OF NAVAJO ECONOMY

From an earlier report¹ the following is quoted:

"The history of the economic life of any group is, from one point of view, the record of their change from a comparatively self-sufficient economy to one of dependence upon other groups. We relate the term civilization to such a process. It is, of course, demonstrable that the conomic history of the past several centuries has been in large measure the story of increasing specialization and superior techniques of transportation and communication, each of these being factors making for increased dependence.

"We are accustomed to think of this as a condition by which modern economy arose, something which is primarily applicable to the eastern hemisphere and its emigrants. In point of fact it appeared among them at an earlier point in time and developed with a greater complexity and speed. However, the very exigencies created by this specialization, and the consequent dependence of great nations upon imperialism and colonization became the circumstances by which so-called "primitive" economies gradually fell victim to greater and greater dependence upon alien production. In the last analysis

1

Tewa Basin Study, page 46.

the most efficient means by which a conquering group bends the conquered to its economic will are through its missionaries and its traders."

The Navajo trader, then, is at the center of this process. The problem of continuous Navajo livelihood is more complex than a simple sufficiency of resources. If the Navajos are to have a continuous sufficiency of resources, the complex influences to which they are subject must be correctly evaluated.

For the purpose of evaluating these forces it is proposed to study external exchange in Navajo economy. The trader as an institution in Navajo economy stands as the functional link between the Navajo and the white culture upon which they increasingly depend.

Therefore, within the limits of this study the unit of consideration will be the trader and the area of consideration will be the complex system of relationships for which the trader stands as an economic institution charged with merchandising white goods to the Navajo and Navajo goods to the white.

Tentatively the following aspects of the problem are marked out for study:

1. Navajo livelihood and business enterprise.
2. Navajo livelihood and the price system.
3. Navajo livelihood and consumers' credit.
4. The trader as director of land use activities.

Navajo Livelihood and Business Enterprise

It is proposed here to undertake an analysis of the way in which traders secure payment for the goods they sell. Certain products which the Navajos produce remain unconverted into trade goods. Others like sheep, wool, and cattle are regularly exchanged for the products of industrial manufacture.

The trader, although the primary functionary in this business intercourse between the Navajo Reservation and industrial civilization, occupies in many ways a minor and non-determinant role in the nature of this intercourse. His function is often given by the exterior circumstances upon which his own position depends; consequently an examination will be undertaken of the wholesaler who performs much the same service to the trader as the trader performs for the Navajo.

Navajo Livelihood and the Price System

The Navajo is subject to many influences that are beyond the power of either the trader or the wholesaler to determine. To the degree that the Navajo depends upon outside goods or upon the sale of his own goods he becomes dependent on a price system. One of the principal characteristics of dependency on a price system is that the same amount of labor, the same resource and the same product will bring markedly different returns as price fluctuates. It is here intended to measure the degree of Navajo dependency upon factors which are at present beyond the ability of planning to control.

THE HISTORY OF THE UNITED STATES OF AMERICA

The history of the United States of America is a story of a people who have grown from a small colony of English settlers to a great nation. The story begins in 1492 when Christopher Columbus discovered the continent. The first English settlers came to the New World in 1607, and the first American-born president, George Washington, was elected in 1789. The United States has since grown to become one of the most powerful nations in the world, with a rich and diverse culture. The story of the United States is a story of progress, of a people who have overcome many challenges and who continue to strive for a better future.

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Navajo Livelihood and Consumer's Credit

One of the salient features of agricultural economy is that income is periodic rather than regular as in the case of wages. The agriculturist sells his crops ordinarily in one season of the year. For the remainder of the year he is dependent either upon accumulated surplus or credit. Both for lack of credit and for lack of storage hay and corn, though produced in quantities insufficient for the consumption requirements of the human and animal population, is often sold to the trader to be bought back at an increase of price later on.

The Navajo, as an agriculturist, sells his crop twice a year - wool in the spring, lambs and agricultural products in the fall. In between those periods he depends upon credit from the trader. It is proposed to examine the operation of this credit system and the function of credit in an economy which has no formal medium of exchange.

The Trader as Director of Land-Use Activities.

The trader has a significant influence on land-use activities. The trader has this influence not as an individual but as a merchant who considers some goods negotiable and others not. The trader, for example, is in the sheep business. His profits depend both upon his ability to sell goods to the Navajo and receive from them goods, which have a relatively high money value; consequently, sheep are

the preferred Navajo product. It is here proposed to describe the effect of commercial exchange as funneled through the trader on the possibility of and prospects for conservative land use.



INTERNAL ECONOMY
OF
THE NAVAJO RESERVATION

A series of institutional studies of the significant, internal aspects of Navajo economy must be projected if the material gathered through the use of the schedule is to be meaningful.

In order to understand the nature and meaning of the primary unit of consideration in the sociological survey, a study of the consumption group will be undertaken. An attempt will be made to determine the arrangements for funding and sharing goods and services within this group, the nature of obligations which bind the activities of the group together, and the regularized division of labor among various members of the group.

The data obtained on the schedule will mark out some of the aspects of exchange obtaining between Navajos. An additional study will be undertaken to determine the extent and nature of all types of regularized exchange of goods or service between consumption groups or individuals.

Exchange occurs as a continuously functioning mechanism in Navajo society. Certain aspects of exchange proceed at an even and fairly constant tempo. These would be characterized as the exchange need dictates. As, for example, of sheep for corn, or corn for fuel. In addition, and equally regularized but occasional form of exchange occurs in the

THEORY OF

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The first part of the book is devoted to the study of the properties of the function $f(x)$ which is continuous on the interval $[a, b]$ and has a finite derivative at every point of this interval. It is shown that such a function is continuous on the whole interval $[a, b]$ and that its derivative is continuous on the same interval.

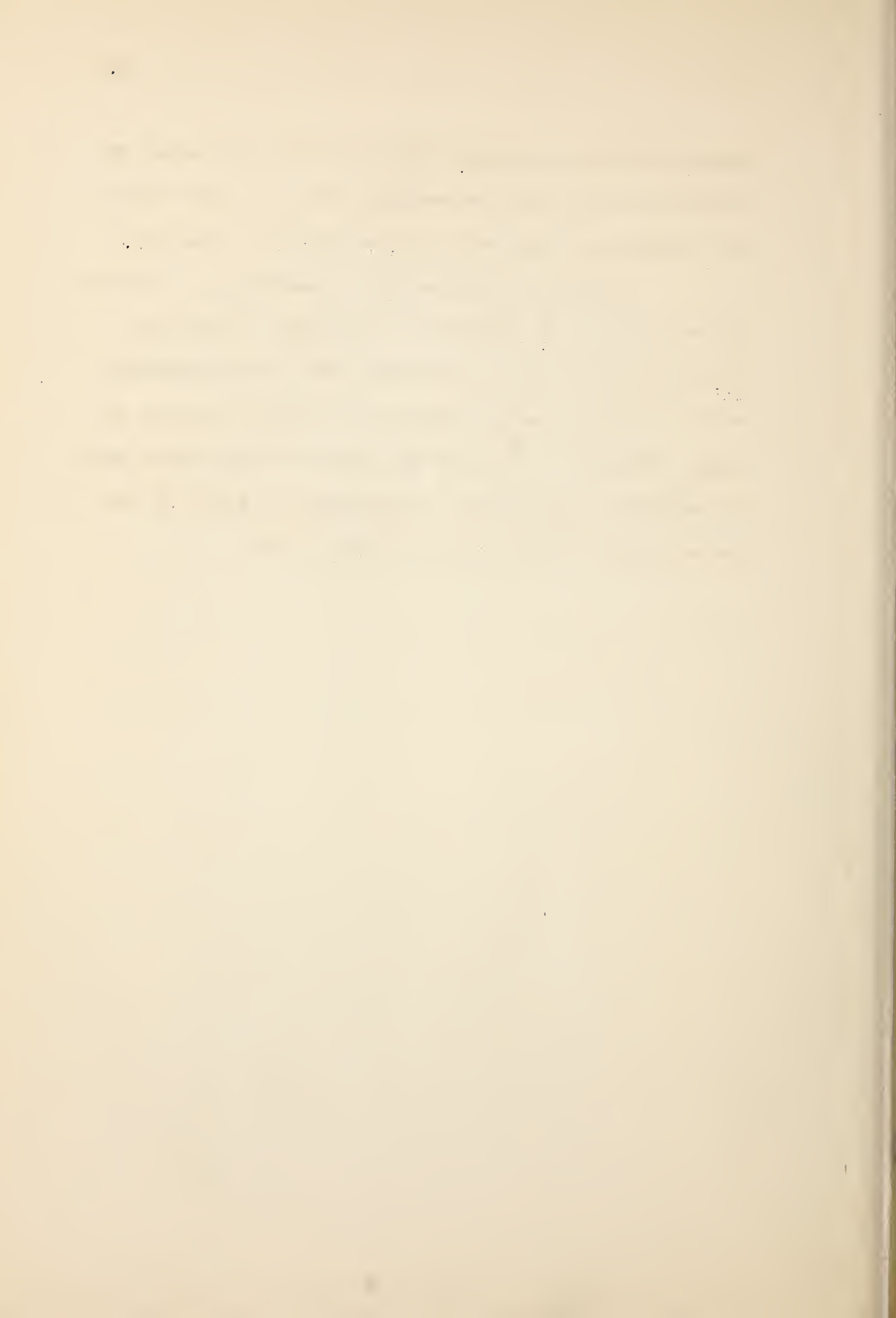
In the second part of the book the properties of the function $f(x)$ which is continuous on the interval $[a, b]$ and has a finite derivative at every point of this interval are studied. It is shown that such a function is continuous on the whole interval $[a, b]$ and that its derivative is continuous on the same interval. It is also shown that the function $f(x)$ is differentiable at every point of the interval $[a, b]$ and that its derivative is continuous on the same interval.

In the third part of the book the properties of the function $f(x)$ which is continuous on the interval $[a, b]$ and has a finite derivative at every point of this interval are studied. It is shown that such a function is continuous on the whole interval $[a, b]$ and that its derivative is continuous on the same interval. It is also shown that the function $f(x)$ is differentiable at every point of the interval $[a, b]$ and that its derivative is continuous on the same interval.

In the fourth part of the book the properties of the function $f(x)$ which is continuous on the interval $[a, b]$ and has a finite derivative at every point of this interval are studied. It is shown that such a function is continuous on the whole interval $[a, b]$ and that its derivative is continuous on the same interval. It is also shown that the function $f(x)$ is differentiable at every point of the interval $[a, b]$ and that its derivative is continuous on the same interval.

course of dances and sings. These occasions are marked by both an intensification of exchange and an intensification of consumption. These will receive particular attention.

By means of the schedule, a measurement of the use of the range and of agricultural lands will be obtained. This information will not, however, give any understanding of the rights to use and dispose of the basic resources in land. Therefore, a study of the nature of these rights will be undertaken. Similarly a consideration of rights to the use of timber and fuel resources will be made.



MAPS AND OTHER GRAPHIC MATERIAL



MAPS

The following is a tentative list of maps to be prepared in connection with the sociological Survey. The list is subject to revision:

FOR USE IN THE FIELD

1. Extensive Range Survey Plats.
2. Atlas Half-tones (Aerial Mosaics Showing Drainage).
3. Agricultural Concentration (4" = 1 mile) Map Showing:
 - a. Individual Fields (numbered)
 - b. Crops
 - c. Fruit and Shade Trees

FOR USE IN PRESENTATION

1. Base Presentation Map.
 - a. Main Drainages
 - b. Hogans and Corrals
 - c. Trading Posts
 - d. Cultivated Fields
 - e. Roads and Trails
 - f. Main Range Boundaries
 - g. Water Supply (springs, stock tanks, etc.)
2. Overlay (Population)
 - a. Human
 - b. Stock
 - (1) Cattle and Horses
 - (2) Sheep and Goats
3. Seasonal Shifts of Population.
 - a. Human Population
 - b. Shifts of Flocks and Herds

The first part of the paper discusses the importance of maintaining accurate records of all transactions. It is essential for the company to have a clear and concise system in place to ensure that all financial data is properly documented and accessible. This will help in the identification of trends and the detection of any potential issues or discrepancies.

The second part of the paper focuses on the need for regular communication and collaboration between all departments. It is crucial for everyone involved in the company's operations to be kept up-to-date on the latest developments and to be able to contribute their own insights and expertise. This will help to ensure that the company is always moving forward in a coordinated and efficient manner.

The third part of the paper addresses the importance of maintaining a strong and healthy corporate culture. This involves creating an environment where employees feel valued and motivated, and where they are encouraged to take ownership of their work and to strive for excellence. A strong corporate culture is essential for the long-term success of any organization.

The fourth part of the paper discusses the need for ongoing training and development for all employees. This will help to ensure that everyone has the skills and knowledge necessary to perform their jobs effectively and to contribute to the company's overall success. Training and development should be a continuous process, with opportunities for growth and learning provided for all employees.

The fifth part of the paper focuses on the importance of maintaining a strong and healthy financial position. This involves careful management of the company's resources and a focus on maximizing profitability. It is essential to have a clear understanding of the company's financial situation and to be able to make informed decisions about how to allocate resources and to manage risk.

The sixth part of the paper discusses the need for regular monitoring and evaluation of the company's performance. This will help to ensure that the company is always on track to meet its goals and objectives and to be able to make adjustments as needed. Monitoring and evaluation should be a continuous process, with regular reviews and reports provided to all stakeholders.

The seventh part of the paper addresses the importance of maintaining a strong and healthy relationship with all stakeholders. This involves clear and open communication and a focus on meeting the needs and expectations of all parties involved. A strong relationship with stakeholders is essential for the long-term success of any organization.

The eighth part of the paper discusses the need for ongoing innovation and research and development. This will help to ensure that the company is always at the forefront of its industry and is able to develop new products and services that meet the needs of the market. Innovation and research and development should be a continuous process, with a focus on staying ahead of the competition.

The ninth part of the paper focuses on the importance of maintaining a strong and healthy environmental and social reputation. This involves a commitment to sustainability and to the well-being of the community. A strong environmental and social reputation is essential for the long-term success of any organization.

The tenth part of the paper discusses the need for regular communication and collaboration between all departments. It is crucial for everyone involved in the company's operations to be kept up-to-date on the latest developments and to be able to contribute their own insights and expertise. This will help to ensure that the company is always moving forward in a coordinated and efficient manner.